

**Amendments to the Claims:**

This listing of the claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-19 (Cancelled).

20. (Withdrawn/Currently Amended). A method for the treatment of a disease, which disease involves signalling of a cytokine through cyc in the pathogenesis of said disease, comprising administering to a subject in need an amount effective to bind to cyc and inhibit cyc/NIK interaction, of a polypeptide comprising:

- (a) NF-κB inducing kinase (NIK); or a mutein;
- (b) a variant of (a) that maintains at least 90% sequence identity with (a) and maintains the ability thereof to bind to cyc and inhibit cyc/NIK interaction, fusion protein, ;
- (c) a pharmaceutically acceptable functional derivative of (a) prepared from the functional groups present on the lateral chains of the amino acid moieties or on the terminal N- or C- groups of the polypeptide of (a), that maintains the ability of (a) to bind to cyc and inhibit cyc/NIK interaction;

(d) a circularly permuted derivative of (a)  
that maintains the ability thereof to bind to  
cyc and inhibit cyc/NIK interaction; or  
(e) a fragment thereof of (a), which maintains the  
ability thereof to bind to cyc and inhibit  
cyc/NIK interaction,

with the proviso that the cytokine is other than IL-2.

21. (Withdrawn). The method according to claim 20, wherein the cytokine is IL-12.

22. (Withdrawn). The method according to claim 20, wherein the cytokine is IL-15.

23. (Withdrawn). The method according to claim 20, wherein the fragment of NIK comprises the C-terminus of NIK (from residue 624 to 947, SEQ ID NO:19).

24. (Withdrawn). The method according to claim 20, wherein the fragment of NIK comprises NIK 640-720 (SEQ ID NO: 18).

25. (Withdrawn). The method according to claim 20, wherein the mutant of NIK is AlyNIK.

26-65 (Cancelled).

66. (Currently Amended). A method for the treatment and/or prevention of a disease in which activation of a cytokine, having the common gamma chain (cyc) in its

receptor, is involved in the pathogenesis of the disease,  
comprising administering to a subject in need an amount  
effective to bind to cyc and inhibit cyc/NIK interaction, of  
a polypeptide comprising:

(a) a fragment of NF-κB inducing kinase (NIK), comprising the cyc binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to cyc and inhibit cyc/NIK interaction;

(b) or a mutein, variant of (a) that maintains at least 90% sequence identity with (a) and maintains the ability thereof to bind to cyc and inhibit cyc/NIK interaction;

(c) , fusion protein, a pharmaceutically acceptable functional derivative of (a) prepared from the functional groups present on the lateral chains of the amino acid moieties or on the terminal N- or C- groups of the polypeptide of (a), that maintains the ability of (a) to bind to cyc and inhibit cyc/NIK interaction; or

(d) or a circularly permuted derivative of (a) that or fragment thereof, which maintains the ability thereof to bind to cyc and inhibit cyc/NIK interaction.

67. (Original). A method according to claim 66, wherein IL-2 is involved in the pathogenesis of the disease.

68. (Withdrawn). A method according to claim 66, wherein IL-15 is involved in the pathogenesis of the disease.

69. (Currently Amended). A method of treatment and/or prevention of a disease in which NF- $\kappa$ B inducing kinase (NIK) and cyc interaction is involved in the pathogenesis of said disease, comprising administering to a subject in need thereof an amount effective to bind to cyc and inhibit cyc/NIK interaction, of a polypeptide comprising:

(a) a fragment of NIK comprising the cyc binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to cyc and inhibit cyc/NIK interaction;

(b) or a mutein, variant of (a) that maintains at least 90% sequence identity with (a) and maintains the ability thereof to bind to cyc and inhibit cyc/NIK interaction;

(c) , fusion protein, a pharmaceutically acceptable functional derivative of (a) prepared from the functional groups present on the lateral chains of the amino acid moieties or on the

terminal N- or C- groups of the polypeptide of (a), that maintains the ability of (a) to bind to cyc and inhibit cyc/NIK interaction; or  
(d), a circularly permuted derivative of (a)  
~~that or fragment thereof, which maintains the~~  
ability thereof to bind to cyc and inhibit cyc/NIK interaction.

70. (Currently Amended). A method of treatment and/or prevention of a disease in which NF- $\kappa$ B activation is involved, comprising administering to a subject in need thereof an amount effective to bind to cyc and inhibit cyc/NIK interaction, of a polypeptide comprising:

(a) a fragment of NF- $\kappa$ B inducing kinase (NIK) corresponding to the cyc binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to cyc and inhibit cyc/NIK interaction;  
(b) or a mutein, variant of (a) that maintains at least 90% sequence identity with (a) and maintains the ability thereof to bind to cyc and inhibit cyc/NIK interaction;  
(c), fusion protein, a pharmaceutically acceptable functional derivative of (a) prepared from the

functional groups present on the lateral chains of the amino acid moieties or on the terminal N- or C- groups of the polypeptide of (a), that maintains the ability of (a) to bind to cyc and inhibit cyc/NIK interaction; or  
(d) ~~or~~ a circularly permuted derivative of (a) that ~~or~~ fragment thereof, which maintains the ability thereof to bind to cyc and inhibit cyc/NIK interaction.

71 (Cancelled).

72. (Withdrawn). A method according to claim 69, for the treatment of cancer.

73. (Currently Amended). A method of treatment and/or prevention of a disease resulting from excessive immune responses, comprising administering to a subject in need thereof an amount effective to bind to cyc and inhibit cyc/NIK interaction, of a polypeptide comprising:

(a) a fragment of NF- $\kappa$ B inducing kinase (NIK) corresponding to the cyc binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to cyc and inhibit cyc/NIK interaction;  
(b) ~~or~~ a mutein, variant of (a) that maintains at least 90% sequence identity with (a) and

maintains the ability thereof to bind to cyc  
and inhibit cyc/NIK interaction;

(c) , fusion protein, a pharmaceutically acceptable  
functional derivative of (a) prepared from the  
functional groups present on the lateral  
chains of the amino acid moieties or on the  
terminal N- or C- groups of the polypeptide of  
(a), that maintains the ability of (a) to bind  
to cyc and inhibit cyc/NIK interaction; or

(d) a circularly permuted derivative of (a)  
that or fragment thereof, which maintains the  
ability thereof to bind to cyc and inhibit  
cyc/NIK interaction.

74. (Original). A method according to claim 73,  
for the treatment of rheumatoid arthritis, osteoarthritis,  
inflammatory bowel disease, asthma, cardiac infarct,  
Alzheimer's disease, or atherosclerosis.

75. (Previously Presented). A method according  
to claim 69, for the treatment of rheumatoid arthritis,  
osteoarthritis, inflammatory bowel disease, asthma, cardiac  
infarct, Alzheimer's disease, or atherosclerosis.

76 (Currently amended). A method for the  
treatment of a disease, which disease involves signalling of  
a cytokine through cyc in the pathogenesis of said disease,

comprising administering to a subject in need an amount effective to bind to cyc and inhibit cyc/NIK interaction, of a polypeptide comprising:

(a) a fragment of NF-κB inducing kinase (NIK)  
comprising NIK 640-720 (SEQ ID NO:18), which  
maintains the ability thereof to bind to cyc  
and inhibit cyc/NIK interaction;

(b) or a mutant, variant of (a) that maintains at  
least 90% sequence identity with (a) and  
maintains the ability thereof to bind to cyc  
and inhibit cyc/NIK interaction;

(c) , fusion protein, a pharmaceutically acceptable  
functional derivative of (a) prepared from the  
functional groups present on the lateral  
chains of the amino acid moieties or on the  
terminal N- or C- groups of the polypeptide of  
(a), that maintains the ability of (a) to bind  
to cyc and inhibit cyc/NIK interaction; or

(d) or a circularly permuted derivative of (a)  
that or fragment thereof, which maintains the  
ability thereof to bind to cyc and inhibit  
cyc/NIK interaction.